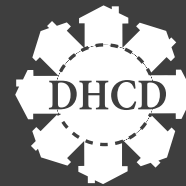


CODE CONNECTION



SUMMER 2007



Deputy Director's Corner

By Emory Rodgers
Deputy Director,
Division of Building and Fire Regulation

It has been awhile since our last *Code Connection* was published. We have been engaged in establishing our new Technical Assistance and Service Office (TASO), and moving forward with our many stakeholders on the promulgation of the 2006 building, fire prevention, building maintenance, industrialized building, amusement device, and certification regulations. The General Assembly was quite active this year, and a number of legislative bills will require regulatory changes in both the building, fire prevention and building maintenance regulations.

In order for us to better offer our stakeholders assistance both generally, and with technical expertise, we established a technical assistance unit – TASO – to complement and provide support to our State Fire Marshal and State Building Code Offices. Additionally, TASO will serve as a liaison and support for numerous boards and advisory committees; provide research and analysis for the General Assembly and the Virginia Housing Commission initiatives and legislation; support state and national code development; develop and provide education and training for regulations and technical amendments; coordinate, integrate, and unify the delivery of training and certification services; house the billing and collection of all surcharges, fees and permits in one consolidated unit; and upgrades our myriad of in-house technology systems.

TASO will enable us to promptly formulate a team response across organizational lines and, through cross-trained staff responsibilities, will enable us to best respond

to and serve our stakeholders needs. Ultimately, TASO will enable the Division of Building and Fire Regulation to improve our level of service to our stakeholders and the public.



In this effort, we welcome Paula Eubank as the new associate director of TASO. Additionally, we congratulate Vernon Hodge on his promotion to technical assistance manager and Marilyn Peterson on her hire as business manager to complement the TASO team. Several other recruitments will be completed over the next several months, including the backfill of Hodge's former position as review board program coordinator.

Eubank, an architecture graduate of Virginia Tech, has 20 years of experience in the private and public sectors in building code enforcement, project management, and design. Hodge has 18 years experience with DHCD, presently serves as the State Technical Review Board's secretary, and for the past seven years has been involved with the regulatory development process.

Other TASO team members include Glenn Dean, who brings many years of explosives and fireworks expertise,

continued on page 2

In this Issue

- 3 Legislation Encourages Energy Efficiency
- 4 ICC & NAHB Partner for Green Building
- 6 The 2030 Challenge
- 8 ICC Elects First Virginian President
- 9 ICC Call for Committees
- 10 Termite Protection in Manufactured Housing
- 11 ICC Disaster Preparedness Tips

- 13 Building Safety Week Proclamation
- 14 Tyco Sprinkler Replacement Program
- 15 Carbon Monoxide Alarm Grant
- 16 2002 NFPA Edition Adopted
- 17 2006 Code Change Cycle Online, FAQs
- 18 TCO News, Accolades, Useful Links
- 19 Upcoming Events/Calendar, Contact Us
- 20 Subscription Information

continued from page 1

training experience, and numerous years of working on code issues in the Statewide Fire Prevention and Uniform Statewide Building Codes. Sandi Morris, DHCD's training and development manager for almost two years, continues to lead the training, development, and certification programs under TASO. Charlotte Carter, having 22 years of experience with DHCD, and Sharon Smith, having 20 years of experience with DHCD, support the TASO team as training and development coordinators, providing curriculum programs and customer service to our clients and constituents. Constance Randolph also assists with the business and administrative functions of TASO.

TASO is currently planning the 2006 code update training with the traditional statewide two-day sessions, and is developing Web-based code update training across the state. We appreciate the necessary time commitment, as the interaction between the code enforcers and the instructors is a very important factor of code update training.

In other news, and as many of you are aware, the State Fire Marshal's Office (SFMO) will relocate to the Virginia Department of Fire Programs (VDFP) on July 1, 2008. DHCD and VDFP are committed to making a seamless transition, one that is the least intrusive and disruptive as possible, while continuing to deliver a superior level of service. Logistical, budgetary, and other details will be resolved over the coming months. Stay tuned as we will share with you the details as they are formulated and approved.

The 2006 regulatory process commenced in November with the Board of Housing and Community Development scheduled to adopt the regulations on Dec. 10, 2007. The regulations will have a March, 2008 effective date. The deadline for new code change submittals is July 27, 2007. A public hearing was held in January of 2007 and another public hearing will be held on July 24, 2007. There will be two public comment periods, one this summer and one early fall of 2007.

As I work with our private and public sector stakeholders, I am reminded how lucky we are in this state to have diversity in ideas, to have the ability for disagreement to be aired in work groups, and to have consensus at the end of the day in the majority of our common and controversial administrative and technical issues.

We are fortunate to have willingness to work together for the common good in a reasonable and responsible manner. The professionalism and countless hours spent and given to make this happen is truly what makes you



and our process so remarkable, and a model for others to follow. What an even better recognition to occur than when these issues are submitted to the International Code Commission (ICC) and are adopted into the national codes and standards.

I would like to thank Quinn Harris, who has provided more than 35 years of service to citizens of the Commonwealth through his work in the Norfolk Regional SFMO office. Also, I would like to acknowledge Steve Shapiro, who will be the ICC President for the 2007-2008 term, and I refer you to an up-close and personal article on Mr. Steve Shapiro in this edition of *Code Connection*. Steve has served us well, and having a large delegation of Virginia code officials is a great way to say thanks and to share in his reaching this most prestigious personal and professional achievement. The Reno ICC meeting will also be of critical importance for the re-election of Bill Dupler to his second term on the ICC Board.

In this edition of *Code Connection*, there are a number of fine staff articles for your digestion, and I hope that you find them informative and that they may provide professional advice and information that you can use in your everyday work.

As always, we welcome your comments and encourage each of you to share your thoughts on *Code Connection*. More importantly, we seek your participation and ask you to provide articles of interest, including regional events and human interest stories.

Thank you,

Emory Rodgers
Deputy Director

General Assembly encourages energy efficiency through tax legislation

By Paula Eubank
Associate Director,
Technical Assistance Service Office

On March 13, the General Assembly enacted another reason to consider energy efficient design and construction for real property in Virginia.

The amendment to the *Code of Virginia* re-classifies certain energy-efficient buildings, excluding the real estate or land on which they exist, in order that they may be taxed at a lower rate than that levied on other property.

The amendment, found in Section 58.1-3221.2 of the *Code*, gives the governing body of any county, city, or town the ability – through an adopted ordinance – to choose to tax energy-efficient buildings at rate equal to or less than that on other general real property.

Per this amendment, energy efficient buildings are defined as any building that exceeds the energy efficiency standards prescribed in the Uniform Statewide Building Code (USBC) by 30 percent.

The certification of such an energy efficient building will be determined by any qualified licensed professional engineer or contractor, unrelated to the taxpayer, who can certify to the taxpayer that their property meets or exceeds the requirements to obtain such certification.



As a result of this change, localities may now be challenged to define what constitutes a 30 percent increase over existing energy efficiency standards as defined in the USBC. The locality may choose to base methods of determining compliance through prescriptive-based (acceptable practice) or performance-based (individual component or total system) standards.

While the USBC standards allow progressive, innovative, and sustainable designs, techniques and materials in their definition, communities may likely utilize a more simplistic interpretation by identifying a basic prescriptive approach to achieving a 30 percent superior energy efficient building.

Localities may also need to examine the particular requirements for and qualifications of the licensed professional contractors who may be used to certify buildings as exceeding energy efficiency standards. While it is the contractor's responsibility to certify his/her qualifications to the locality, the practical responsibility of verifying compliance with the energy efficiency standards may fall

incumbent upon the localities.

Communities utilizing this option will likely seek confirmation of their financial investment through tax incentives, and property owners as well, in expending additional construction costs.

ICC and NAHB Partner for Voluntary Residential Green Building Standard

By Paula Eubank
Associate Director,
Technical Assistance Service Office

At the 63rd Annual International Builder's Show in Orlando, Florida this February, the International Code Council (ICC) and the National Association of Home Builders (NAHB), supported by the United States Green Building Council (USGBC), announced their partnership to collaboratively develop and publish a voluntary residential green building standard. This alliance reinforces the commitment of each organization to sustainable building practices, and to social and environmental responsibility.

This national standard is to be based upon the Model Green Home Building Guidelines, published by NAHB in 2004, which presently serves as the foundation of at least one dozen green building programs nationwide. The standard will be crafted in accordance with American National Standards Institute (ANSI) requirements, and may be used as a conformance guide for local green home building construction programs and practices, and as a reference guide for local building departments.

After editorial revision of the 2004 edition, a working draft of the ANSI National Green Building Standard, also to be published by the NAHB, will be based upon Consensus Committee and public comment and is available for review at www.nahbrc.org/greenguidelines/. The completion date for the standard development activities and final ANSI approval is anticipated toward the end of 2008.

Consistent with the other codes and standards, including the guidelines, the newly developed ANSI standard will emulate the code development process of consensus committee (balance), public comment (openness), and due process (fairness) as utilized with the creation and adoption of a final consensus document.

Periods of public review and comment, including supporting statements, assist the Consensus Committee with the identification of provisions or areas requiring further consideration and development.

Although the selection of Consensus Committee membership has concluded, their meetings will be open to all interested parties. The Consensus Committee may

consider the formation of task groups which will invite participation from field specialists, authorities, and experts for the development and resolution of specific issues.

The initial public comment period closed April 15, 2007 and served solely as preliminary input. A second public comment process in accordance with ANSI requisites will be held later in the year.

The ICC states its policy position regarding green building and sustainable communities as one of proactive participation with responsible activities that are environmentally and ecologically sustainable, paralleling the mission statement and strategic goals of the association.

Through a strong commitment to such activities, ICC professionals tasked with building safety can ensure the sustainability and safety of green building technologies and practices, while achieving a positive impact on the green building movement and the green built environment.

During this movement, and the development of green building practices and standards, the involvement and function of the ICC is evolving. Toward this end, the ICC is charged with piloting the field of building safety as:

- An educator of its membership in reference to environmentally responsible/green buildings and the available programs for their accomplishment;
- A resource to the membership relative to the provision of available and accurate information to encourage the most informed decisions regarding sustainable/green building;



continued from page 4

- An advocate for the membership and monitor of their interests in the legislative, regulatory, and code arenas to provide a forum and opportunity to voice on sustainable/green building;
- A facilitator of the I-Codes relative to the application of sustainable and safe building policies; and
- A promoter of the I-Codes relative to its environmental references and features toward the understanding of its acceptability and achievability.

The National Association of Home Builders (NAHB) strongly advocates that a voluntary and flexible program, which considers and accommodates regional factors and geographic variations, would be the most successful instrument to channel the information and to widely implement progressive and innovative sustainable green construction practices, techniques, and materials.

Unknowingly, the architecture and building community is annually responsible for almost half of all environmental



and atmospheric deterioration caused by energy consumption and greenhouse gas emissions at the national level. At 48 percent, residential building construction contributes the majority of energy consumption and resource depletion, and thus the most significant impact on atmospheric degradation and global warming by the constructed community.

Effective, efficient, and affordable design and construction that reduces building energy consumption by 50 to 80 percent are easily attainable, and achieved at a minimal or no additional cost. Their lower operational costs over the life span of the building far outweigh the initial material expenditures.

Eventually, green construction materials and methods will be incorporated into the code or will affect the code language. Ultimately, the implication of green building and environmental sustainability will be so widespread as to impact each and every code and standard, as well as daily living.



The greening of the codes is inevitable and will mandate the necessary time and effort expended by individuals and organizations, including the ICC - which is a first and primary contributor to and promulgator of change.

Presently a champion in this field, the ICC supports green building and environmental sustainability toward its strategic goal of social responsibility

and public visibility to improve the quality, safety, and health of life in the communities.

This ICC and NAHB affiliated venture will provide a uniform standard, a benchmark for sustainable and green building design methods, and construction practices that are transparent, measurable, and beneficial to the residential building society - owners, builders, consumers, and manufacturers alike.

Several Web links of related interest are provided below:

<http://www.epa.gov/greenbuilding/>
<http://www.eere.energy.gov/>
<http://www.sustainableenergycoalition.org/>
<http://www.usgbc.org/>
<http://www.vsbni.org/>
<http://www.buildinggreen.com/>
<http://www.greenerbuildings.com/>
<http://www.thegbi.org/gbi/>
<http://www.adpsr.org/>
<http://www.southface.org/>
<http://www.commonfire.org/community/greenwelcome.html>

The 2030 Challenge strives to bring awareness to energy

By Paula Eubank
Associate Director,
Technical Assistance Service Office

Did you know that buildings are responsible for nearly half of all energy consumption and Green House Gas (GHC) emissions each year in the United States? Globally, the percentage is even greater. Throughout the total 30 to 40 year lifespan of a public building, the initial construction cost represents only 20 to 30 percent of its operational costs. The rest is energy.

Transportation, at 27 percent, and industry at 25 percent, trail behind the 48 percent of energy consumption and resource depletion of residential building construction – and thus the negative impact of environmental and atmospheric deterioration and global warming by the construction community.

The annual energy required to operate residential, commercial, and industrial buildings and their equipment, in combination with the embodied energy of industry-produced building materials such as steel, concrete, glass, carpet, and tile, exposes the built environment as the largest energy consuming and greenhouse gas emitting sector.

It has been consistently demonstrated that through a conscientious and effective design, it may be possible to reduce building energy consumption by 50 to 80 percent. In addition, this could be achieved at minimal or no additional cost. Since the 1980's, countless efficient and effective buildings have been designed and constructed both in the United States and abroad that reiterate this point.

Within the next 30 years, 75 percent of the built environment in the U.S. will be either new or renovated construction. These 30 years represent a transformational opportunity for the architecture and building community to reverse the most significant crisis of modern time, climate change.

The 2030 Challenge

To reduce the impact that buildings have on the environment, Architecture 2030, a nonprofit and non-partisan organization sponsored by New Energy Economy, has created the 2030 Challenge.

The 2030 Challenge targets immediate and subsequent

levels of incremental building performance relative to energy efficiency, to reach a built environment which emits zero carbons into the atmosphere by the year 2030.

Echoing this call to action, the U.S. Conference of Mayors has adopted strong policies and resolutions for governmental entities to actively and effectively reduce fossil fuel consumption and global warming pollution. The federal government, as well as numerous state and municipal governments, have adopted sustainable and green performance standards and fostered agency programs toward this end.

New construction and renovation projects of city buildings should immediately be designed to implement energy efficiency performance standards of half the fossil fuel consumption of the U.S. average for that building type, as defined by the U.S. Department of Energy.

All other new municipal construction, renovation, repair, and replacement projects are encouraged to immediately be designed with, and implement, cost effective energy efficient green building practices and performance standards to the maximum extent possible.

All new buildings should achieve a carbon-neutral goal, to operate totally with an energy source that utilizes no depletable fossil fuels, and to emit no greenhouse gases by the year 2030.

The goal should be accomplished incrementally with a 10 percent reduction every five years as follows:

- A 60 percent reduction by the year 2010;
- 70 percent by 2015;
- 80 percent by 2020; and
- 90 percent by 2025.

The U.S. Conference of Mayors is urging mayors nationwide to develop plans and programs to fully implement the previously mentioned targets for all new municipal construction and renovation projects within their cities.

The 2030 Challenge in Virginia

On a statewide level, the 2030 Challenge echoes the goals of Governor Tim Kaine with the institution of an energy policy and plan to protect natural resources and reduce environmental consequences.

continued from page 6

Effective April 9, 2007, Governor Kaine issued an executive order directing state agencies to improve energy efficiency, mandating an increase in energy efficiency by 20 percent and a reduction in non-renewable energy consumption and its associated purchase cost by 20 percent over that of 2006 by the year 2010.

In the future, Virginia's government facilities, including both new construction and renovation, are expected to utilize new innovative conservation technologies and employ energy efficiency standards when determined practical and cost efficient, in accordance with the U.S. Green Building Council standards and/or the U.S. Environmental Protection Agency and Department of Energy's Energy Star Ratings.

The 2030 Challenge has been signed by Richmond Mayor Doug Wilder and five other mayors across Virginia.

Upon the request of the administration of the City of Richmond, the Virginia Society of the American Institute of Architects convened a progressive collaborative meeting on March 30, 2007 at the Virginia Center for Architecture, to provide viable ideas and to fashion a feasible plan for its implementation in the City of Richmond.

Federal, state, and local governments are encouraged to follow suit with the adoption of resolutions for sustainable, green, and energy efficient building practices and standards.

The USBC and Energy Efficiency

It is also important to acknowledge that the current national building codes and standards, as adopted and amended by the Virginia Uniform Statewide Building Code (USBC), also promote energy efficient sustainable and green design and construction through the permissible use of alternative and innovative technologies.

Localities and municipalities should recognize that the USBC provides local building officials with the ability to accept and encourage alternative building options, when conforming with the spirit and intent of the codes, and complying with the equivalent requirements for fire resistance, strength, durability, quality, effectiveness, and not compromising public health, safety and welfare.

In substantiation of a modification request, the Building Official may consider future editions of nationally recognized model or performance codes and standards, as well as statements from registered design



professionals. Each locality is encouraged to learn the premises, functions, and properties of these sustainable and green practices and materials and the ability to apply them more and more frequently in the field.

The Division of Building and Fire Regulation encourages you to consider taking part in the 2030 Challenge. Richmond's 2030 meetings have provided an opportunity for participants to combine forces and produce a collaborative resolution, with amplified effects on both the potential participation of other localities as well as the environment.

To learn more about the 2030 challenge, and to find out where meetings may be held in your area, contact Ed Mazria, FAIA at <http://www.architecture2030.org/> or <http://www.mazria.com/>. The national AIA web site at http://www.aia.org/adv_sustainability also provides many links to various resources regarding green construction practices and environmental sustainability.

On a statewide level, the 2030 Challenge echoes the goals of Governor Tim Kaine with the institution of an energy policy and plan to protect natural resources and reduce environmental consequences.

A recent cost benefit analysis performed by Lawrence Berkeley National Laboratory concluded that the financial benefits of green design and construction equal \$50 to \$70 per square foot, more than ten times the additional cost investment of green building.

Virginian to take the helm of the International Code Council

By Hollie Cammarasana
Public Relations Director,
DHCD



This fall, the International Code Council (ICC) is expected to name a Virginian as its president, the first since the ICC was formed through the consolidation of the Building Officials and Code Administrators (BOCA), International Conference of Building Officials (ICBO), and the Southern Building Code Congress International (SBCCI), in 2003.

Steven Shapiro, Director of Codes Compliance for Hampton, Virginia, is next in line, and already has a vision in place for the future of the ICC during his term.

Shapiro is a 1975 graduate from the University of Maryland with a degree in zoology. However shortly after graduation, his career turned toward construction and building code safety. Shapiro began his career in construction, moving into building inspection for Arlington County in 1980.

Throughout his career, Shapiro has moved from chief inspector for the City of Hampton, becoming building official and director of the building department for Hampton in 1987, and director of both the building and zoning departments (now called Codes Compliance) in 1995. In addition to his degree from the University of Maryland, Shapiro holds an Associates Degree in engineering from Northern Virginia Community College and a Masters in Public Administration from George Washington University.

Shapiro has enjoyed the benefits of working in the public service sector throughout his 28-year career. "Public service isn't something you do to get rich," said

Shapiro. "It's rewarding to work with people to solve problems that have real benefits to the public."

Shapiro began his work with the ICC before it was established, through his work with BOCA. He served on the board of directors for BOCA for nine years. Before BOCA consolidated with the other two legacy model code organizations, Shapiro served as its last president for four months.

"I enjoyed being a volunteer leader, the ICC has more than 43,000 members, and to serve them through leadership will be a very rewarding experience," said Shapiro.

Shapiro says one of his key goals as future leader of the ICC will be in raising the profile of the important work done by code officials.

"A lot of what code officials do is unnoticed, because if we do our jobs right – nothing happens," said Shapiro. "We have the best building safety codes in the world, but we don't always get recognized in terms of our contributions to public safety."

As an example, he noted earthquakes of similar size that occurred in Central California and Iran. In 2003, a 6.5 magnitude earthquake in California claimed two lives, injured 45 people, and damaged 500 homes. The same year a 6.6 magnitude earthquake took 26,000 lives, injured 30,000 and destroyed nearly 85 percent of the buildings in the area in Iran.

During his tenure as ICC President, Shapiro plans to travel and interact with ICC members, to learn what they want from their membership and make himself available.

Additionally, Shapiro plans to continue ICC's participation in the inter-operability movement, known as SMARTcodes, an automated code compliance checking system.

The inter-operability project, already a reality in Singapore and Norway, will allow building officials, engineers, and architects to view building plans in a common format – allowing for more easily shared information, and allowing departments to more easily check for code compliance.

"This is ICC's first research and development project; it is the wave of the future," said Shapiro. "Just imagine an architect submitting plans via the Internet, the engineer makes changes instantaneously, the plans are checked for code compliance in three dimensions, estimators bid

continued from page 8

on the project – all via the Internet because all the information is in the inter-operable format.”

Also, Shapiro plans to continue pushing the ICC’s I-codes as a single comprehensive and competitive source of code enforcement.

“Currently, every state uses one or more I-codes,” says Shapiro. “Our goal is to continue promulgating codes that all states can feel confident in utilizing.”

His term will run from October, 2007 through October, 2008. To contact Steve Shapiro, e-mail sshapiro@hampton.gov or sshapiro@iccsafe.org.

International Code Council issues call for committees

By Ed Altizer
State Fire Marshal,
State Fire Marshal’s Office

The International Code Council (ICC) has issued a call for volunteers to serve on committees that will begin the development of the 2009 ICC family of codes.

Approximately every 18 months, the ICC recruits volunteers from across the nation, and the globe, to draw on their collective experience for the development of appropriate safety levels for specific model codes. To be successful, experts from various and diverse disciplines, interests, experiences and geographical settings are recruited.

This model of code committee formation is key toward providing a quality, knowledgeable, balanced perspective on the codes to the ICC members, who are ultimately responsible for passage of the final version. ICC Code Committee’s have been responsible for the generation of the most widely accepted suite of codes in the United States.

ICC Code Committee members are appointed by the applicable International Building, Fire, and Mechanical/Plumbing Code Councils. There are 14 code committees, five interpretation committees, and one code correlation committee.

More than 200 positions will be filled for terms of 18 months, beginning Jan. 1, 2008 through June 30, 2009. All code committee seats are open, and 2006 through 2007 committee members whose term expires Dec. 31, 2007 must reapply to be considered for re-appointment.

Code committee members are dedicated volunteers, and are not compensated. However, the ICC will fund all expenses associated with code committee meetings, including travel, lodging and meals. The only expense that cannot be reimbursed is time expended on the work.



Manufactured home requirements for termite protection

By Curtis McIver
State Building Code Administrator,
State Building Code Administrative Office

As the Terminex ad on television says, its termite season.

For the last few months, we have received inquiries from local code officials and product retailers for information about code requirements for soil treatment and protection methods against termite damage, relative to manufactured homes. The questions centered around whether manufactured homes were required to comply with code regulations regarding termite protection, and if so, what type of protection against termites is required.

First, the Uniform Statewide Building Code (USBC) is not considered applicable to manufactured homes.

Section 419.2 of the USBC states that: *Construction work associated with the installation of a manufactured home or industrialized building shall comply with the manufacturer's installation instructions and to the extent not provided for in the manufacturer's installation instructions applicable requirements of this code.* (Emphasis added.)

When the manufacturer's installation instructions do not address protection against termite damage, then the requirements of the International Residential Code (IRC), as adopted in the USBC, should be applied to manufactured homes and industrialized or modular buildings constructed as single family dwelling units under the IRC.

The requirements for protection against termites and termite damage are found in Section R320 of the 2003 edition of the IRC under the current USBC. Section R320.1 states in part that in areas favorable to termite damage, methods of protection shall be by chemical soil treatment, pressure preservative treated wood, naturally termite-resistant wood, physical barriers (such as metal or plastic termite shields) or any combination of these methods.

Virginia is known to have a moderate to heavy probability of infestation for homes, which means that unless local data shows no history of termite damage, localities should be considered as areas favorable to termite damage, and one or more of the above methods of protecting against termite damage is required.

If chemical soil treatment is utilized to protect against termite damage, the concentration, rate of application, and treatment method of the termiticide shall be in accordance with the manufacturer's instructions on the termiticide label. Verification of the application by the treatment applicator may be required by the local code official to document code compliance.

It is important to note that the general contractor or homebuilder holds the responsibility for compliance with this code

requirement under the USBC. Although a common misconception, the subcontracted employment of a pest management company or applicator to apply a pre-treatment shall not waive or defer the responsibility of the contractor or homebuilder for compliance with the code, despite the pest management trade licensure required by the state.

Since physical barriers are also an approved method of protection, the steel I-beams of a manufactured home could be considered to physical termite barrier, as well as the vinyl skirting. However, if the manufactured home has masonry or wood-backed skirting chemical soil treatment may be required if a suitable physical barrier cannot be provided.

Please call our office at (804) 371-7160 if you would like to discuss this further with one of our staff, or to express interest in training opportunities for your organization or jurisdiction.

In conjunction with their enforcement and education plan, a training manual was developed by and is available from the Virginia Department of Agriculture and Consumer Services, Office of Pesticide Services, and the Virginia Pest Management Association.



PREPARE YOUR HOUSE

There are many ways you can better prepare your house to withstand the effects of a natural disaster.

BEFORE A HURRICANE

- If your house does not have permanent shutters, plan to protect your windows and glass doors with the low-cost alternative of plywood panels. Long before storm season approaches, cut 1/2-inch marine plywood to fit each window and glass door. Pre-drill holes every 18 inches for easy installation of screws. Save the panels where you can easily access them during an emergency. Clearly mark each panel so you can quickly determine which window it covers.
- The roof of your house is very vulnerable to hurricane winds. Reinforce the connection between the roof and walls with hurricane straps and bracing to resist a hurricane's uplift.
- Reinforce double-entry front doors, as well as garage doors.
- Clear away dead or weak tree branches that may break off and damage your house in high winds.

BEFORE A FLOOD

- Stock up on building materials such as plywood, plastic sheeting, hammer, nails, saw, pry bar, shovels, and sandbags. In the case of an emergency, you will be better off already having these items on hand.
- Prevent electrical damage by raising the level of electrical components (fuse and circuit breaker boxes, meters, switches, and outlets). This can save you from the expense of replacing a flood-damaged system, and it will help prevent fires caused by short circuits. Remember that a licensed contractor should do this work.



Teach every family member when and how to dial 9-1-1 for emergency assistance.



BEFORE AN EARTHQUAKE

- Brace overhead light fixtures.
- Repair any defective electrical or gas connections.
- Secure your water heater by strapping it to wall studs or bolting it to the floor (this can prevent a possible gas leak and provide a convenient source of clean water after an earthquake).
- Repair cracks in foundations or ceilings.
- Bolt your house to its foundation.

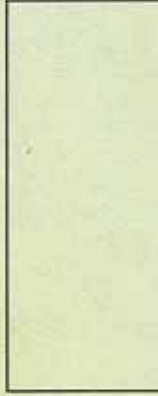
BEFORE A WILDFIRE

- Install smoke detectors on every level of your house, in every bedroom, and in hallways leading to bedrooms.
- Use fire-resistant materials when building or renovating. Most importantly, use tile or flame-retardant shingles on your roof.
- Keep vegetation, yard debris, and any other combustible materials at least 30 feet away from your house.
- Plant trees away from your house at a distance greater than their mature height. If you do have trees close to your home, trim them to a height of 8 to 10 feet and keep them free of dead or dying wood.
- Use stone walls, swimming pools, or patios to create a shield safety zone between vegetation and your house.
- Avoid planting shrubs near your house. Instead, try alternatives like a fountain or rock garden.
- Clear roof gables of dead limbs, needles, and other debris.

SUPPORT BUILDING SAFETY!

DISASTER PREPAREDNESS
TIPS FOR YOUR
HOME AND FAMILY

For more information about building codes and local requirements, contact your local building department below:



Developed and
provided by



INTERNATIONAL
CODE COUNCIL
*People Helping People
Build a Safer World™*

INTERNATIONAL CODE COUNCIL
1-888-ICC-SAFE
1-888-472-7233
www.iccsafe.org

REF. TI-09-142



PREPARE YOUR FAMILY

Although no one can prevent natural disasters from occurring, there are many things you can do to make the impact less devastating for your family.

Every home should have 3 key elements in place before a disaster strikes:

1. Evacuation Plan
2. Communication Plan
3. Emergency Supply Kit

EVACUATION PLAN

In the event of an emergency such as a flood, wildfire, tornado, or hurricane, you may be instructed to evacuate your home. Depending on the type of natural disaster, you may have to travel 20 to 50 miles to get your family to safety. Establish a "safety destination" (like a friend or relative's house some distance away) and plan several different routes to get there so you can drive around roadblocks or hazards. Practice your plan and become familiar with each route so you will be better prepared.

You may need to turn off your gas, water, and electricity before you evacuate. Each member of the house should learn when and how to do this.



Know Your Neighbors

Find out if any of your neighbors will need extra help during an emergency. This includes disabled and people with small children who need you to look after them.

COMMUNICATION PLAN

During an emergency it is usually easier to make long distance calls, so choose an out-of-state relative to be your family's "communication center." Be sure that each member of your family knows the name and phone number for this person in case you are separated. By having everyone call one central person, it will be easier for you to check on each other and reunite after a disaster.

EMERGENCY SUPPLY KIT

Whether you are preparing for an earthquake, tornado, hurricane, flood, or wildfire, you will need the following basic items in your kit:

- battery-operated radio and extra batteries
- one gallon of water per person per day for at least three days, for drinking and sanitation
- flashlight and extra batteries
- canned food
- first aid kit and manual
- prescription medications you take every day such as insulin, heart medicine, and asthma inhalers
- non-prescription medications (aspirin or non-aspirin pain reliever)
- dust masks
- large garbage bags and plastic ties for personal sanitation
- local maps
- infant formula and diapers
- portable container for important family documents
- cash or traveler's checks and change
- fire extinguisher
- matches in a waterproof container
- paper and pencil
- books, games, puzzles, or other activities for children
- battery-operated lantern and extra batteries
- blankets
- hand-operated can opener
- durable shoes and change of clothes for each member of your family
- basic tools (wrench, hammer)
- utility gloves

Place all items in a sturdy, closed container outside your home where it can be easily located. Restock food and water twice a year. For detailed information on an emergency preparedness kit please visit the Homeland Security website at <http://www.ready.gov/america>.



PET SUPPLY KIT

An emergency kit for your furry friends should include:

- food
- water
- bowl
- medication and medical records
- first aid kit (ask to your veterinarian about what is most appropriate for your pet's emergency medical needs)
- collar with ID tag, harness, or leash
- crate or other pet carrier
- sanitation (pet litter and litter box, newspapers, plastic trash bags)
- a picture of you and your pet together
- favorite toys, treats, or bedding
- blanket
- name and phone number of your veterinarian

Place all items in a sturdy, closed container outside your home where it can be easily located. Restock food and water twice a year. For detailed information on an emergency preparedness kit please visit the Homeland Security website at <http://www.ready.gov/america>.





CERTIFICATE of RECOGNITION

By virtue of the authority vested by the Constitution in the Governor of the Commonwealth of Virginia, there is hereby officially recognized:

BUILDING SAFETY WEEK

WHEREAS, through Virginia's continuing attention to building safety, citizens experience comfort and peace of mind that structures are safe and well-built; and

WHEREAS, building safety and fire prevention officials work year round to guide the safe construction of buildings and homes; and

WHEREAS, Building Safety Week, sponsored nationally by the International Code Council and promoted by the Virginia Department of Housing and Community Development statewide, is designed to educate the public about the role that building safety and fire protection officials, local and state building department, and federal agencies play in protecting our lives and property; and

WHEREAS, this year's Building Safety Week theme, "Building Smarter...for Disasters and Everyday Life," encourages Virginians to raise our awareness of building safety issues and take the appropriate steps to ensure that the places where we live, work, play, and learn are safe; and

WHEREAS, as we observe Building Safety Week, we ask Virginians to consider projects to improve building safety at home and in the community, and to recognize local building safety and fire prevention officials and the important role they play in public safety;

NOW, THEREFORE, I, Timothy M. Kaine, do hereby recognize May 6-12, 2007, as **BUILDING SAFETY WEEK** in the **COMMONWEALTH OF VIRGINIA**, and I call this observance to the attention of all our citizens.



Handwritten signature of Timothy M. Kaine.

Governor

Handwritten signature of Katherine K. Hanley.
Secretary of the Commonwealth



STATE FIRE MARSHAL'S OFFICE INFORMATION BULLETIN

Tyco to End Glass Bulb Sprinkler Replacement Program

Claims must be submitted by

Aug. 31, 2007 to avoid fees and penalties



DATE: May 15, 2007

Central Sprinkler Company, an affiliate of Tyco Fire Products LP, of Lansdale, Pa. has announced that the Consumer Product Safety Commission (CPSC) has approved their request to end the glass bulb sprinkler replacement program.

Tyco provided the following statement to the State Fire Marshal's Office.

"August 31, 2007 will be the last day for eligible claimants to submit a valid claim for participation in the Voluntary Replacement Program (VRP). Claimants are urged to submit their claim to Central Sprinkler by that date if they want to participate in the VRP.

Claimants who have submitted their claims prior to May 1, 2007, but whose claims remain incomplete because of missing information, forms or photographs, will receive notice of the deficiency from Central Sprinkler reminding them what is missing and informing them that the deficiency must be corrected before the August 31, 2007 deadline or their claim will be voided.

Claims submitted after May 1, 2007 and on or before the August 31, 2007 deadline, and whose submitted claim is incomplete, will receive notice of deficiency from Central Sprinkler informing them that they have until August 31, 2007, or 60 days from the date of the deficiency notice, to complete the information for their claim or else the claim will be voided. Central intends to afford all claimants at least 60 days to cure incomplete claims."

Based on our original estimate of the number of defective sprinklers that may be in Virginia, nearly 70 percent have been replaced. However, it is estimated that as many as 200,000 have still not been identified.

Although the voluntary replacement program is ending, the defective sprinklers remain a problem and are no longer approved; therefore, they remain in violation of the Statewide Fire Prevention Code. The State Fire Marshal's Office (SFMO) will require replacement of the sprinklers when found. Owners who fail to take part in the Central (Tyco) replacement program before it is discontinued will eventually be required to replace the sprinklers at their cost.

It is essential for owners to understand that this is a significant life safety issue that can be corrected at minimal costs to them if they participate in the program.

If any defective sprinklers are found, owners should immediately contact Central for replacement of the recalled sprinklers. Central may be reached at (800) 871-3492 or on the Web at www.SprinklerReplacement.com. The sprinkler models recalled may also be reviewed at that site. Owners must complete the application process, but Tyco has assured us that they will help with that process.

The list of affected sprinklers is available on the SFMO Web page at:
http://www.dhcd.virginia.gov/State_Fire_Marshal/default.htm.

If you have questions, please contact Ron Reynolds, SFMO Chief Engineer at: (804) 371-7170 or e-mail: ron.reynolds@dhcd.virginia.gov, or Ed Altizer at (804) 371-7154 or ed.altizer@dhcd.virginia.gov.

You may also check our Web page for a list of our regional offices and other sprinkler replacement information, or go directly to Central's replacement program Web site at <http://www.sprinklerreplacement.com> as indicated above.

Carbon Monoxide Alarm Grant program aims to save lives, increase awareness

By Hollie Cammarasana
Public Relations Director,
DHCD

Every year, more than 480 people in the United States die from unintentional exposure to carbon monoxide, and more than 15,000 are sent to hospital emergency rooms for treatment.

In 2005 six of those deaths occurred in Virginia, according to the Office of the Chief Medical Examiner. Additionally, fire departments throughout the state responded to 635 carbon monoxide exposure-related incidents, according to the Virginia Fire Incident Reporting System (VFIRS).

Carbon monoxide, known as the “invisible killer,” is an odorless, colorless gas created when fuels – such as gasoline, wood, coal, natural gas, propane, oil and methane – burn incompletely. Carbon monoxide is also produced by motor vehicles.

To increase awareness about the dangers of carbon monoxide poisoning, the Carbon Monoxide Alarm Grant Program was launched this spring to not only educate the public about the dangers of carbon monoxide, but to provide carbon monoxide alarms to those in at-risk groups.

The program was developed as a collaboration between the Virginia Department of Housing and Community Development (DHCD), Virginia Department of Fire Programs (VDFP), State Fire Marshal's Office (SFMO), and the Virginia Fire Services Board (VFSB). The Carbon Monoxide Alarm Grant Program is making available a limited number of carbon monoxide alarms to fire departments, nonprofits, and community organizations charged with delivering fire and life safety related education and/or services in Virginia, and who applied for and were approved for the grant.

Alarms are targeted for at-risk groups, identified as unborn babies, infants, children, the elderly, and those with heart or lung problems.

Eligible fire departments must participate in the Virginia Fire Information Reporting System (VFIRS) program, and nonprofits and community organization grantees must

partner with a VFIRS participating fire department. They will also be required to provide free installation of the alarms, along with educational information, to homes of the targeted at-risk population.

Additionally, grantees will be required to develop an installation program plan, outlining how they will administer the grant, with special attention to the following aspects:

- Providing fire safety and carbon monoxide poisoning prevention and detection education to recipients;
- Continuing recordkeeping and reporting;
- Identifying at-risk households to receive alarms; and
- Providing marketing and public relations outreach to the target audience and surrounding community about the program and dangers of carbon monoxide poisoning.

More than \$100,000 has been allocated for the program, and approximately 5,500 alarms are expected to be distributed.



Sprinkler system standards will be updated with adoption of 2006 codes

By Ron Reynolds
Chief Engineer,
State Fire Marshal's Office

When Virginia adopts the 2006 International Code Commission (ICC) codes, codes and standards referenced within, for the most part, will change to more recent versions.

This is the case with the National Fire Prevention Association (NFPA) 13 - *Standard for the Installation of Sprinkler Systems*, which will be updated with the 2006 ICC adoption. In the current ICC standards, NFPA 13 references standards from 1999. Under the 2006 codes, NFPA 13 will reference the most recent 2002 edition, which has been in use in some parts of the country for a few years now.

In the April 2007 edition of *Sprinkler Age*, a magazine published by the American Fire Sprinkler Association, an article addressing important changes in the requirements for protecting unoccupied attics with combustible wood joist or wood truss construction was published.

Of concern were roofs "...with a slope of 4 in 12 or greater, and members 3 feet or less on center." The article, written by Parks Moore, a National Institute for Certification in Engineering Technologies (NICET) Level IV sprinkler sales/design manager from Alabama, gives the perspective of a contractor who is concerned that designers, contractors, and Authorities Having Jurisdiction (AHJs) understand the new standards and avoid costly mistakes.

Moore points out that attic design rules were adopted because of deficiencies in the existing protection brought to light by recent fire testing. This subject is discussed on page 214 of the *Automatic Sprinkler Systems Handbook* (Dubay, 2002). The tests revealed that fires in attics race past the sprinklers along the roof to the peak, before the sprinklers can activate. The 2002 NFPA 13 addresses this problem with reduced areas of protection per sprinkler, and reduced spacing between sprinklers.

Moore noted one item of particular concern by saying, "possibly the single most misunderstood, and yet most substantial change to the attic requirements is found in

Table 8.6.6.6.1(a). Sprinklers in attics with steeply pitched roofs and wood structural members spaced 3 feet or less on center are now limited to a maximum protection area of 120 square feet."

NFPA 13 provides spacing scenarios of 8' x 15' and 10' x 12'. A footnote explains that the smaller dimension shall be measured perpendicular to the slope. Some are confused and may get tripped up by this wording. Another way of putting it is that "the smaller dimension must be measured parallel" to the peak ridge line of the roof. The 8' dimension in the 8' x 15', and the 10' dimension in the 10' x 12' are to be measured along the peak line, and not down the roof slope.



Moore notes that when exceeding an 8' spacing along the ridge, the minimum sprinkler head pressure required is 20 psi. This is not obvious from Table 8.6.2.2.1 (a), but Moore points out that this is clarified in the annex (A.8.6.2.2.1).

This higher pressure makes up for the additional distance between sprinklers, giving the designer more flexibility. However, a 5.6 K sprinkler "delivers almost 70 percent more water at 20 psi compared to the same head at 7 psi. Therefore, this may not be a viable option for systems in areas with lower available pressures or flows."

Paragraph 8.6.4.1.4.4 allows the designer to "use a 4.2 K sprinkler in attics for wet systems or for dry systems where the piping is corrosion resistant or internally galvanized. A 4.2 K head at 20 psi only requires about 27 percent more water than a 5.6 K head in the scenario stated above."

These changes were made with the intention of improving the performance of sprinklers in attics with steep roofs and closely spaced wooden structural members. Some of the issues and questions have already been brought before the NFPA 13 technical committee, and are addressed into the 2007 edition of the *Automatic Sprinkler Systems Handbook*. Plan reviewers and AHJ's in Virginia may want to consider adding this handbook to their code book toolbox.

2006 Code Change Cycle Information Online

By Vernon Hodge
Technical Assistance Manager,
Technical Assistance Service Office

Virginia's building and fire regulations, including the Uniform Statewide Building Code (USBC) adopts and incorporates, by reference, the international codes produced by the International Code Council. The 2006 editions of these codes became available in early 2006.

Typically every three years, when the new editions of the nationally recognized model codes become available, Virginia's Division of Building and Fire Regulation begins the process of reviewing the new codes for incorporation into Virginia's regulations. This process involves the solicitation of input from stakeholders concerning this incorporation into Virginia's regulations.

This year, a Web page has been developed specifically to provide information concerning the 2006 Code Change Cycle. The page provides information on all of the activity involved in updating the building and fire regulations. The web page may be accessed at

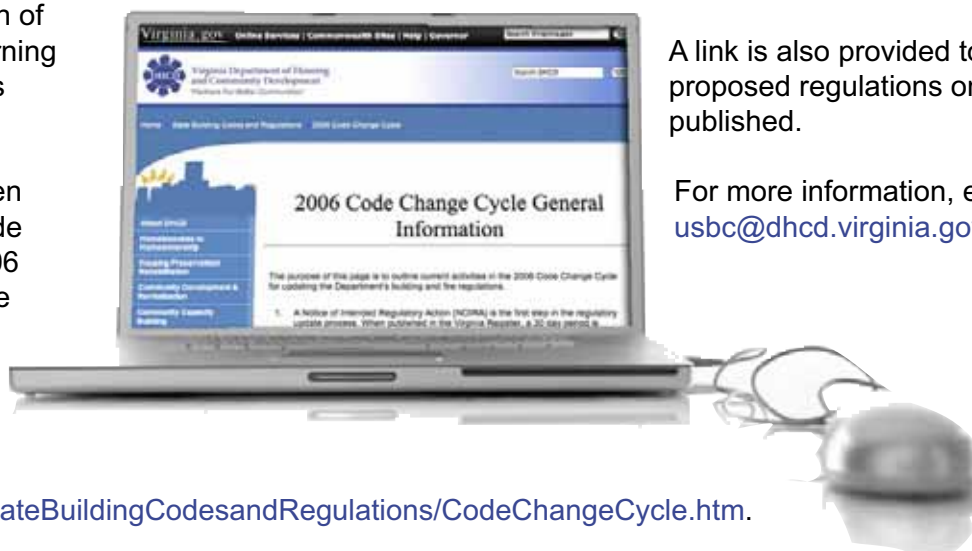
<http://www.dhcd.virginia.gov/StateBuildingCodesandRegulations/CodeChangeCycle.htm>.

The Web page provides an overview of the activities involved in the code change process, and provides specific information for review and use by interested parties. Currently, the Web page provides:

- A detailed explanation of the steps in the code change process;
- A list of forms and publications relative to the process, including a simplified and revised code change form;
- Copies of all agenda packages reviewed by the Codes and Standards Committee of the Board of Housing and Community Development; and
- A list of code change workgroups and their assignments.

A link is also provided to view the proposed regulations once they are published.

For more information, e-mail:
usbc@dhcd.virginia.gov.



Code Connection FAQs

Question: Based on sections 1013.4.2.1 and 1013.4.2.2 of the 2003 Uniform Statewide Building Code (USBC), what is the minimum width of an aisle accessway for tables and chairs in seating areas?

Answer: "Aisle accessway" is a defined term in Section 1002 and therefore would have the same meaning wherever used in the code. Because both Sections 1013.4.2.1 and 1013.4.2.2 refer to aisle accessways, it does appear there is a conflict.

Section 1013.4.2.1 requires a minimum of 36 inches for aisle accessways by reference to 1013.4.1. We believe

that 1013.4.2.1 actually refers to the aisles required in the seating areas which must be a minimum of 36 inches, and are not the same as the aisle accessways limited by length with a minimum width of 12 inches in accordance with 1013.4.2.2.

Based on staff discussions and the code commentaries and illustrations for both the 2000 and 2003 editions of the International Building Code, it appears the intent of the code was to allow the 12 inch minimum widths for aisle accessways among tables and chairs, which would lead to 36 inch minimum aisles that in turn lead to exits.

We also believe that section 1013.4.2.1 should only use the term aisle and that the word accessway should not be in that section.

Training and Certification Office News

TCO Online

The Training and Certification Office (TCO) is pleased to announce a new online system! TCO Online allows you to establish or update your user profile; to access the current training calendar; to view announcements related to upcoming events and course changes; and to observe your individual training and certification history.

The new automated features allow you to manage your own training and certification needs and activities. Additionally, it allows TCO to respond to user requests in a more effective and timely manner, increasing customer satisfaction. Visit the Training and Certification Online system today!

Jack Proctor Virginia Building Code Academy Instructor Opportunities Available

The Virginia Building Code Academy (VBCA) is pleased to announce that instructor opportunities are currently available in a number of technical courses and CORE modules.

Certified code enforcement personnel interested in instruction will be provided with a comprehensive 11-day training program which offers skill development in instruction, introduction to curriculum development, theories of adult learning, and several opportunities to test acquired skills with presentation demonstrations.

All instructors are provided with ongoing support to ensure that each instructor, regardless of skill level, has the opportunity to receive feedback and resources for continued instructor development.

Please visit our Web site for more information on upcoming train-the-trainer courses.

Accolades

In future editions of Code Connection, this section will be reserved for acknowledgements, achievements, awards, honors, merits, recognitions, and special services of code enforcement personnel dedicated to the health, safety, and welfare of the Commonwealth's citizens and communities.

Should a jurisdiction, locality, or person desire to acknowledge and recognize a professional associate as an exemplary industry contributor, including exceptional levels of accomplishment such as Master Code Professional (MCP) and Certified Building Official (CBO), please submit the achiever's information with their name, position title, jurisdiction, summary of achievement, and statement of appreciation to:
codeconnection@dhcd.virginia.gov.



Useful Links

Training and Certification Office

<http://www.dhcd.virginia.gov/TCO/default.htm>

Virginia Building Code Academy Schedule

<http://www.dhcd.virginia.gov/TCO/Docs/2006VBCAScheduleApplication.pdf>

Code Publication Order Form

<http://www.dhcd.virginia.gov/TCO/Docs/Publication%20Order%20Form.pdf>



Upcoming Events/Calendar

July 10 – Amusement Device Technical Advisory Committee Meeting
 July 10 – 12 – Jack A. Proctor Virginia Building Code Academy Building Inspection Module
 July 17 – 19 – Jack A. Proctor Virginia Building Code Academy Property Maintenance Module
 July 20 – State Building Code Technical Review Board Meeting
 July 24 – Board of Housing and Community Development Public Hearing on 2006 Codes
 July 24 – Board of Housing and Community Development Board Meeting
 July 27 – Deadline for Receipt of 2006 VUSBC Code Change Proposals
 July 26 – 2006 Code Change Cycle Workgroup 2 USBC IBC Administrative Amendments Meeting
 July 30 – 2006 Code Change Cycle Workgroup 5 Wildland/Urban Interface Code Meeting
 July 31 - 2006 Code Change Cycle Workgroup 3 USBC IBC Technical Amendments Meeting
 July 31 – August 2 – Jack A. Proctor Virginia Building Code Academy Core Module

August 10 – 11 – VPMIA 2007 Summer School Day of Instruction and Annual Picnic
 August 20 – Deadline for Receipt of 2007/2008 ICC Code Change Proposals
 August 20 - 2006 Code Change Cycle Workgroup 5 Wildland/Urban Interface Code Meeting
 August 24 – VBCOA Board of Directors Meeting

September 5 – 7 – Jack A. Proctor Virginia Building Code Academy Core Module
 September 7 – Building Code Academy Advisory Committee Meeting
 September 11 – 13 – Jack A. Proctor Virginia Building Code Academy Electrical Inspection Module
 September 20 – 2006 Code Change Cycle Workgroup 5 Wildland/Urban Interface Code Meeting
 September 25 – 27 – Jack A. Proctor Virginia Building Code Academy Plumbing Inspection Module
 September 30 – October 4 – ICC 2007 Annual Educational Conference at Reno Nevada

Contact Us

Division of Building and Fire Regulation

(804) 371-7150

emory.rodgers@dhcd.virginia.gov

Manufactured Housing and Industrialized Buildings

(804) 371-7160

curtis.mciver@dhcd.virginia.gov

manufacturedhousing@dhcd.virginia.gov

State Fire Marshal's Office

(804) 371-7170

ed.altizer@dhcd.virginia.gov

statefiremarshal@dhcd.virginia.gov

TASO – Technical Assistance Service Office

(804) 371-7150

paula.eubank@dhcd.virginia.gov

Technical Assistance

(804) 371-7174

vernon.hodge@dhcd.virginia.gov

Training and Certification

(804) 371-7180

sandi.morris@dhcd.virginia.gov

tco@dhcd.virginia.gov

Business Services

(804) 371-7164

marilyn.peterson@dhcd.virginia.gov

Code Connection Subscription

"Code Connection" is published by the Virginia Department of Housing and Community Development. The purpose of the publication is to keep interested parties aware of events on the state and local levels. The newsletter addresses training schedules, interpretations by the Technical Review Board, and articles of interest to building and fire-prevention professionals.

"Code Connection" may be sent to you electronically or by mail FREE of charge. To be added to our mailing list, please complete the following information and send it to: codeconnection@dhcd.virginia.gov or fax to (804) 371-7092.

Name: _____ Title: _____

Employer: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____ Email: _____



Virginia Department of Housing
and Community Development
The Jackson Center
501 North Second Street
Richmond, Virginia 23219

We're on the Web:

<http://www.dhcd.virginia.gov/>